

AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A compound having the general formula (I)
 $M_5(AO_4)_3X$,
wherein
M represents Ba, Sr, Ca or a mixture thereof;
A represents P, V or a mixture thereof; and
wherein the group $M_5(AO_4)_3$ forms an apatite structure and X is situated in the hexagonal channels of the apatite structure and includes Cu-atoms, with the proviso that the compound is not $Sr_5(VO_4)_3(CuO)$, $Sr_5(VO_4)_3(Cu_{0.894}O_{0.952})$, or $(Sr_{0.9}Ca_{0.1})_5(Cr^V O_4)_3(CuO)$.
2. (Cancelled)
3. (Currently amended) The compound of claim 1, wherein X further represents a certain fraction of mixture including Cu^{2+} , and/or Cu^+ , O^{2-} , and O^{2-} ions mixed with anions such as OH^- , F^- , Cl^- , Br^- and/or Γ^- .
4. (Original) The compound of claim 1, wherein X comprises copper ions.
5. (Previously Presented) The compound according to claim 1, wherein X comprises Cu^{2+} .
6. (Previously Presented) The compound according to claim 1, wherein linear units O-Cu-O are present in the hexagonal channels of the apatite structure.
7. (Previously Presented) The compound according to claim 1, wherein X represents $Cu_xO_yH_z$, wherein $0 < x \leq 0.85$, $0 \leq y \leq 1$ and $0.5 \leq y \leq 1$.

8. (Previously Presented) The compound according to claim 7, wherein $0.1 \leq x \leq 0.6$.
9. (Previously Presented) The compound according to claim 1, wherein A represents P.
10. (Currently Amended) A process for preparing a compound according to claim 1 comprising the steps:
 - (i) mixing of compounds comprising the elements M, A and X,
 - (ii) thermal treatment of the mixture in the range of 200 to 1700°C, wherein the thermal treatment is performed in ambient air to yield a compound of the general formula (I).
11. (Original) The process according to claim 10, wherein the thermal treatment is performed for 0.01 to 60 hours.
12. (Previously Presented) The process according to claim 10, wherein the thermal treatment is performed when intermediate regrinding.
13. (Previously Presented) The process according to claim 10, wherein the thermal treatment of the mixture is performed in air, argon or oxygen.
14. (Currently Amended) The process according to claim 10, wherein the final thermal treatment is performed in ambient air, followed by further comprising the step
 - (iii) (a) air quenching or
 - (b) substituting the ambient air by dry air and slow cooling of the sample thermal treatment of the compound obtained in step (ii) in oxygen, inert gas atmosphere or vacuum at 500 to 900°C for 0.5 to 24 hours.
15. (Currently Amended) The process for preparing a compound of claim 1 comprising the steps
 - (i) mixing of carbonates of M, Cu-compounds, and (NH₄)H₂PO₄ or a V-compound or mixtures thereof and Cu compounds,

- (ii) thermal treatment of this mixture in solid state in air at 600 to 850°C for 1 to 5 hours,
- (iii) regrinding,
- (iv) thermal treatment in air at 1100 to 1400°C for about 1 to 24 hours,
- (v) air quenching cooling and
- (vi) regrinding.

16. (Previously Presented) Pigment comprising a compound of claim 1.
17. (Previously Presented) Pigment according to claim 16, wherein X in the compound of general formula (I) comprises Cu²⁺.
18. (Currently Amended) A method of coloring a material comprising adding the pigment of claim 16 to the material use of a compound according to claim 1 comprising using said compound as pigment, paint or as coloring additive in cements or plasters.
19. (Currently Amended) Pigment comprising a compound prepared by a process according to claim 10 14.
20. (Previously Presented) Pigment comprising a compound prepared by a process according to claim 15.